

U.S. GEOLOGICAL SURVEY

WISCONSIN DISTRICT

Our mission is to develop and maintain a comprehensive water resources program responsive to the needs of Wisconsin and the United States.



- **HYDROLOGIC INVESTIGATIONS**
- **HYDROLOGIC DATA COLLECTION**
- **HYDROLOGIC ANALYTICAL TECHNIQUES**
- **HYDROLOGIC DATA BASES**

INVESTIGATIONS

The objective of Wisconsin District projects is to help cooperating agencies solve practical water problems. Water issues that are addressed by these projects include:

- *Water-quality and -quantity assessments*
- *Environmental contamination site investigations*
- *Effects of toxic substances in natural waters*
- *Effects of rural and urban nonpoint pollution*
- *Surface-water/ground-water interactions*
- *Sediment transport and chemistry*
- *Effects of climate change*
- *Effects of acid precipitation*
- *Wetland functions and hydrology*
- *Aquifer and streamflow characterization*
- *Lake eutrophication*
- *Effects of droughts and floods*



Wisconsin District projects encompass all hydrologic disciplines and related scientific fields:

- *Surface-water hydrology*
- *Ground-water hydrology*
- *Water chemistry*
- *Geology*
- *Geochemistry*
- *Biology*
- *Climatology*
- *Limnology*
- *Ecology*
- *Geomorphology*

DATA COLLECTION

Basic hydrologic data collection is a major part of the Wisconsin District program. Much of the data collection is done by telemetry from field locations. Wisconsin District personnel collect the following types of data:

- *Stream discharge at more than 250 sites*
- *Water-quality data at more than 100 streams, 90 wells, and 70 lakes*
- *Ground-water levels at about 200 sites*
- *Precipitation quantity and quality*
- *Stream sediment characteristics*
- *Biological characteristics of streams*



Water-quality sampling and analyses are conducted for a wide range of constituents:

- *Major inorganics*
- *Trace elements*
- *Dissolved gases*
- *Pesticides*
- *Isotopes*
- *PCB's and other synthetic compounds*
- *Biological indicators*
- *Nutrients*

ANALYTICAL TECHNIQUES

The projects undertaken by the Wisconsin District use state-of-the-art techniques as well as traditional methods that have retained their usefulness, including:

- *Watershed modeling*
- *Flood-frequency analysis*
- *Sediment/chemical load analysis*
- *Geochemical modeling*
- *Ground-water flow and solute-transport modeling*
- *Doppler and acoustic velocity measurement systems*
- *Geographic information systems*
- *Borehole drilling and testing*
- *Surface and borehole geophysics*
- *Low-level mercury analysis*
- *Aquatic organism tissue analysis*



DATA-BASE CAPABILITIES

Water-related data maintained in the National Water Information System (NWIS) are available to the public. This includes:

- *Automated Data Processing System (ADAPS) for surface-water data*
- *Ground-Water Site Inventory (GWSI) system for ground-water data*
- *Quality of Water Data (QWDATA) system*
- *State Water Use Data System (SWUDS)*

Sophisticated data bases, including Geographic Information Systems, are also developed for specific projects.

ABOUT THE WISCONSIN DISTRICT

As one of 48 Districts in the Water Resources Division of the U.S. Geological Survey, the Wisconsin District is part of a Federal agency devoted to scientific research, applied science, data collection, and information dissemination. In addition to the District program, the Water Resources Division in Wisconsin includes a Cartographic and Publications Program. Other Divisions of the U.S. Geological Survey are the Geologic, Biological Resources and National Mapping Divisions.

A cooperative-funding program allows the Wisconsin District to contribute funding for cooperative studies with State and local government agencies for up to 50 percent of the total cost. Additional funding for District projects comes directly from the Federal budget and from other Federal agencies.

REPORTS

Interpretive results of Wisconsin District projects and tabulated data are published as reports that can be purchased from:

***U.S. Geological Survey
Branch of Information Services
Box 25286
Denver, CO 80225-0286
Telephone: (303) 202-4700
Or call 1-800-USA-MAPS for more information***

or examined at the Wisconsin District office and selected other libraries.

Project results are also published in scientific journals and presented at public meetings throughout the state and nation.

Summaries of current projects are published annually in the report, "Water-Resources Investigations in Wisconsin," and are available from the Wisconsin District office.

FOR INFORMATION

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